

Application No. 10/553,689
Amendment Dated: August 21, 2007
Reply to Office Action of March 22, 2007

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REMARKS

Applicants respectfully request that the application be reconsidered in light of the above amendments and the following remarks.

Claims 1-11 have been amended. No claims have been cancelled. New Claims 12 and 13 have been added.

Claim 1 has been amended to further clarify that the molar ratio of the Lewis Acid to the electron donor in the catalyst precursor is about 0.1:1 to about 0.75:1. Support for this amendment may be found, for example, at Page 13, line 21, of the application as originally filed, and in Claim 4 of the application as originally filed. Claim 1 has also been amended to further clarify that the catalyst is partially pre-activated in step (5) for about 10 minutes to about 60 minutes prior to the transferring step (6). Support for this amendment may be found, for example, at Page 13, lines 24-26. In addition, Claim 1 has been amended to further clarify that the polymer produced has a density of 0.930 g/cc or more. Support for this amendment may be found, for example, in the inventive Examples.

Claim 2 has been amended to depend from Claim 1, and to further limit the recited filler to comprise a porous catalyst support. Support for this method may be found, for example, in Claim 2 as originally filed.

Claim 3 has been amended to further limit Claim 1 such that the mole ratio of total Lewis Acid to electron donor in the precursor is from about 0.1:1 to about 0.3:1. Support for this amendment may be found, for example, at Page 13, line 22, and in Claim 5 as originally filed.

Claims 3, 4, 7, 8, 9, 10, and 11 have been amended to remove the multiple dependency on Claims 1 or 2. The claims, as amended, now depend from Claim 1.

Claim 5 has been amended to be consistent with the amendments made to Claim 3.

Claim 6 has been amended to further clarify that the catalyst precursor is partially pre-activated, consistent with the amendments made to Claim 1 from which Claim 6 depends.

Claim 8 has been amended to further clarify that the slurry of Step (4) is intimately mixed with the Lewis Acid using one or more vertically disposed static mixers, correcting the previous recitation referring to the slurry of Step (2) being mixed as such.

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New Claim 12 has been added to further limit the mixing time of the partially pre-activated catalyst to about 15 minutes to about 45 minutes prior to the transferring step (6). Support for this amendment may be found, for example, at Page 23, line 10, in Example 5.

New Claim 13 has been added to further limit the presently claimed invention to a process wherein the quantity of fines produced is at least 10 percent less than the quantity of fines in a polymer produced under the same conditions but without the partial pre-activation according to step (5) of the process of claim 1. Support for this amendment may be found, for example, at Page 18, line 35, to Page 19, line 3, of the application as originally filed. Accordingly, no new matter has been added.

Claim Rejections Under 35 USC §112, second paragraph

Claims 4-6 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The conjunction "and" in line 3 of Claim 4 has been amended to recite "or" to further clarify that the R" group members in the selective group are in the alternative. Applicants respectfully request that the rejection be withdrawn.

Claim Rejections Under 35 USC §102

Claims 1-11 have been rejected under 35 USC §102 (e) as being anticipated by U.S. Patent Number 6,617,405 to Jorgensen (hereinafter Jorgensen-405.)

Applicants have amended the present application to further clarify that the catalyst precursor is only partially preactivated (i.e., wherein the molar ratio of the Lewis Acid to the electron donor in the catalyst precursor is about 0.1:1 to about 0.75:1) prior to addition of the catalyst slurry to the reactor. In contrast, Jorgensen-405, discloses "[e]ssentially complete activation of the precursor is carried out prior to introduction of the precursor into the reactor", wherein the catalyst precursor is preactivated using about 1 mole of activator per mole of electron donor to about 2 moles of activator per mole of electron donor (see Col. 5, lines 35-40, Jorgensen-405). As such, Jorgensen-405 fails to disclose or suggest all the limitations recited in Applicants' presently claimed invention. Accordingly, Applicants respectfully submit that Jorgensen does not anticipate the subject claims. Applicants respectfully request that the rejection be withdrawn.

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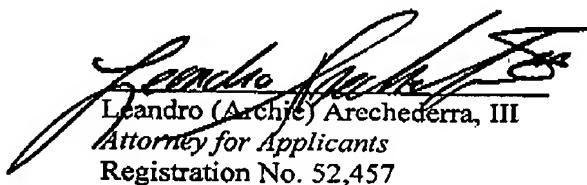
Claims 1-11 have been rejected under 35 USC §102 (e) as being anticipated by U.S. Patent number 6,187,866 to Jorgensen et al. (hereinafter Jorgensen-866.)

Jorgensen-866 is directed towards a process which produces low-density polymers. Jorgensen-866 fails to disclose a process wherein the density of the polymer comprising ethylene has a density of 0.930 g/cc or more. Accordingly, Jorgensen-866 fails to disclose or suggest all the limitations recited in the subject claims. Accordingly, Applicants respectfully submit that Jorgensen-866 does not anticipate the subject claims. Applicants respectfully request that the rejection be withdrawn.

Applicants respectfully request that all rejections be withdrawn and solicit a prompt notice of allowability. In the alternative, Applicants invite the Office to telephone the undersigned attorney if there are any other issues outstanding which have not been presented to the Office's satisfaction.

Respectfully submitted,

8/21/07
Date


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